

Title (en)

HEATABLE BATTERY PACK, HEATABLE BATTERY SYSTEM, AND VEHICLE

Title (de)

BEHEIZBARER AKKUPACK, BEHEIZBARES BATTERIESYSTEM UND FAHRZEUG

Title (fr)

BLOC-BATTERIE CHAUFFANT, SYSTÈME DE BATTERIE CHAUFFANT ET VÉHICULE

Publication

EP 4184665 A4 20240110 (EN)

Application

EP 22789146 A 20220610

Priority

- CN 202122367357 U 20210928
- CN 2022098233 W 20220610

Abstract (en)

[origin: EP4184665A1] The present application provides a heatable battery pack, a heatable battery system and a vehicle, and belongs to the field of battery technologies. The heatable battery pack includes a battery, a first switch module, and a heater; the present application the battery, the first switch module, and the heater are connected in series to form a heating loop, wherein the first switch module turns on the heating loop after a drive signal is received. Compared with the related art in which heaters in various battery packs are connected in series to both ends of a drive module in a high-voltage box, so as to perform high-voltage power supply on the heaters by the high-voltage box through a series loop, the example of the application directly performs low-voltage power supply on respective heaters by batteries in the battery packs, and the high-voltage power supply by the drive module is not required, which significantly improves the safety of power supply.

IPC 8 full level

H01M 10/615 (2014.01); **B60L 1/02** (2006.01); **B60L 58/27** (2019.01); **H01M 10/42** (2006.01); **H01M 10/48** (2006.01); **H01M 10/625** (2014.01); **H01M 10/63** (2014.01); **H01M 10/637** (2014.01); **H01M 10/657** (2014.01); **H01M 10/6571** (2014.01); **H01M 50/249** (2021.01); **H01M 50/298** (2021.01)

CPC (source: EP KR US)

B60L 1/02 (2013.01 - EP); **B60L 58/12** (2019.01 - US); **B60L 58/27** (2019.01 - EP KR US); **H01M 10/4207** (2013.01 - EP KR); **H01M 10/425** (2013.01 - EP KR US); **H01M 10/48** (2013.01 - EP US); **H01M 10/482** (2013.01 - EP KR); **H01M 10/486** (2013.01 - EP); **H01M 10/615** (2015.04 - EP KR US); **H01M 10/625** (2015.04 - EP KR US); **H01M 10/63** (2015.04 - EP KR); **H01M 10/637** (2015.04 - EP); **H01M 10/657** (2015.04 - EP KR); **H01M 10/6571** (2015.04 - EP); **H01M 50/249** (2021.01 - EP KR); **H01M 50/298** (2021.01 - KR); **H02J 7/0048** (2020.01 - US); **B60L 2240/545** (2013.01 - EP); **B60L 2240/549** (2013.01 - EP US); **B60Y 2200/91** (2013.01 - KR); **H01M 50/298** (2021.01 - EP); **H01M 2010/4271** (2013.01 - EP KR); **H01M 2220/20** (2013.01 - EP KR US); **Y02E 60/10** (2013.01 - EP)

Citation (search report)

- [X] CN 102842935 A 20121226 - GUANGWEI AMERICA LINE ELECTRICAL APPLIANCE CO LTD, et al
- [A] US 10744885 B2 20200818 - JAMMOUL JACQUELINE [US], et al
- [A] US 8605450 B2 20131210 - KANESHIGE MASAHIRO [JP], et al
- See references of WO 2023050880A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

EP 4184665 A1 20230524; **EP 4184665 A4 20240110**; CN 216054914 U 20220315; JP 2023547003 A 20231109; JP 7453412 B2 20240319; KR 20230048244 A 20230411; US 2023125606 A1 20230427; WO 2023050880 A1 20230406

DOCDB simple family (application)

EP 22789146 A 20220610; CN 202122367357 U 20210928; CN 2022098233 W 20220610; JP 2022562817 A 20220610; KR 20227035496 A 20220610; US 202218087248 A 20221222